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(54) Title: PROCESS FOR MEDICAL IMPLANT OF CROSS-LINKED ULTRAHIGH MOLECULAR WEIGHT POLYETHYLENE HAVING IMPROVED BALANCE OF WEAR PROPERTIES AND OXIDATION RESISTANCE					
(57) Abstract					
A medical implant of ultrahigh molecular weight polyethylene having an improved balance of wear properties and oxidation resistance is prepared by irradiating a preform of ultrahigh molecular weight polyethylene, annealing the irradiated preform in the absence of oxygen to a temperature at or above the onset of melting temperature, and forming an implant from the stabilized cross-linked polymer. Implants prepared according to the process of the present invention have comparable oxidation resistance and superior wear performance compared to unirradiated ultrahigh molecular weight polyethylene.					